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ABSTRACT

In 1989, North Iowa Area Community College (NIACC) conducted a study of transfer students to examine the relative effect of college attendance on academic achievement, transfer students' satisfaction with their college experience, and the college's fulfillment of general education goals. The study examined the length of exposure to college effects, as measured by total semester credit hours (SCH) earned, and student satisfaction with NIACC as determined through a mailed survey. Study findings, based on a 61.24% response rate, included the following: (1) a significant relationship existed between SCH earned at NIACC and the level of transfer student satisfaction with NIACC preparation for the workplace; (2) no significant difference or relationship was observed between SCH earned at NIACC and grade point average at graduation from a four-year institution; (3) no difference was observed between SCH and student satisfaction with the extent to which NIACC had prepared them as individuals, citizens, or family members; (4) the number of SCH earned at NIACC had little or no influence to student outcomes. However, the data did prove that the length of community college attendance was not negatively related to selected student outcomes. Appendixes state the purposes and hypotheses of the study, list general education goals, report findings from previous studies on community college effects, present the demographic characteristics of NIACC students, and offer a summary and conclusions. (JMC)

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A STUDY OF THE RELATIVE EFFECT OF THE COMMUNITY COLLEGE ON
TRANSFER STUDENTS: ACHIEVEMENT AND SATISFACTION

Presented at:

The Annual Meeting
of the
Council of Universities and Colleges

at the

American Association of Community and Junior Colleges
70th Annual Convention

Seattle, Washington
April 22, 1990

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INTRODUCTION

Student assessment in higher education appears in many forms, provides vast information, and serves the needs of emerging groups. Fife (Jacobi, et al, 1987) suggested that student assessment will be used as long as educators, legislators, parents, and other concerned persons are interested in understanding student impact and the effectiveness of post-secondary education.

Assessment may serve a variety of purposes. These purposes include cost analysis, program evaluation, goal setting, program development, marketing, strategic or long-range planning, student feedback, and accountability. Accountability, as a rationale of assessment, is receiving increasing attention from external agencies, parents, and even students themselves. Jacobi (et al, 1987) stated that this heightened interest was based on an assumption that colleges and universities had a basic responsibility to the providers of fiscal support. Specifically, post-secondary education needed to demonstrate that institutional goals were being attained and in a cost-effective fashion.

Bowen (1974, p. 1) described accountability as follows: "It means that colleges and universities are responsible for conducting their affairs so that the outcomes are worth the cost. It implies that institutional efforts would be directed toward appropriate goals and the outcomes would be directed toward appropriate goals and should be achieved at minimum cost. It also implies that an institution should report credible evidence on the degree to which it is achieving its mission . . ." Goal orientation and cost effectiveness were Bowen's guides for accountability. However, assessment is required in determining goal achievement and effectiveness.

Assessment of how a college impacts its students is but one facet of institutional and mission accountability, yet it is one of the least understood. Astin (1977) stated that due to the lack of and/or poor research techniques, there was very little that

could be stated with confidence about the impact of college. He noted further that economic pressures were increasing for information on college effects on students. Without it, public officials may move to transfer financial support away from higher education to more accountable public purposes.

BACKGROUND

Community college students have varied backgrounds and reasons for attending college. Community college students may be interested in illiteracy remediation, retraining, personal development, or preparation to transfer to a baccalaureate-granting institution (Cohen, 1987). For example, Stevenson (et al, 1989) conducted a case study of Mt. Hood Community College's students during the fall, 1983, to determine student reasons for enrollment at the college and the relationship of student intentions to actual fulfillment of goals. The reasons for student enrollment at Mt. Hood included increasing employment potential, personal enrichment, earning a two-year degree, earn a four-year degree, and exploration of career directions. Preparation for transfer to a baccalaureate-granting institution is just one reason for enrolling at a community college. In addition to the transfer student, others entering the community college may be career or vocational students, non-credit/continuing education students, or career option students--an amalgam of the transfer student and the career student.

As stated previously, colleges and universities may establish a student assessment program for a variety of reasons. At North Iowa Area Community College (NIACC) student assessment was precipitated primarily by three areas: Diminishing institutional fiscal projections, statewide studies of higher education, and preparation for the North Central Accreditation Association review in 1993. His present study was used to provide information in each of these areas.

PROBLEM STATEMENT

Community colleges, like other educational institutions, are asked to document their impact on students. However, much of the literature reviewed on the effect of community colleges were descriptive studies of graduates or alumni. Generally, these studies surveyed former students to determine job titles, income levels, job responsibilities, employment status, relation of college study to current employment, and satisfaction with college services. Both Ewell (1985) and Pace (1984) stated that student outcomes research has examined a number of outcome typologies (e.g., persistence, change in major, job performance, and advanced degree attainment).

Another form of community college outcome assessment has been the comparison of former community college graduates with native university students (i.e., students who begin their study at the baccalaureate-granting institution) or senior college students (Oswalt, 1986; Giddings, 1985; Richardson and Doucette, 1980; Koos, 1970; Knoell and Medsker, 1965). The primary purpose of these studies was to compare the progress, persistence, performance, and degree achievement rates of transfer students at four-year institutions. The Knoell and Medsker Study (1965), in particular, not only compared native students and transfer students, but also determined characteristics linked to success after transfer. However, these traits were linked to grades, persistence, and graduating on time. While these studies tested for differences between the performance of transfer students and native university students, none examined student attainment of the goals of general education.

A review of these and other studies assisted in understanding what happened to college graduates after leaving the community college and provided a conceptual basis for the design and methodology of the study. Thus, the purpose of this study was to

describe and examine the interaction of student satisfaction with the community college experience and the academic achievement of the transfer student at a baccalaureate-granting institution. While portions of the previous studies contained components related to the present study, none posited a similar purpose and methodology.

PURPOSE OF THE STUDY

This study described selected demographic and educational characteristics of North Iowa Area Community College transfer students. In addition, this study determined the relative effect of college attendance on student academic achievement, student satisfaction with the college experience, and the College's fulfillment of general education goals.

GENERAL HYPOTHESIS

This study tested the general hypothesis that the effect of the community college on the transfer student varies with the amount of exposure (attendance) to the college environment. The specific amount of college exposure may be measured by cumulative semester credit hours earned. Simply stated, the greater the cumulative number of semester credit hours earned, the greater the college effect in academic achievement at a baccalaureate-granting institution and the greater student satisfaction with the community college experience.

RESEARCH QUESTIONS

This study determined the relative effect of college attendance on transfer student academic achievement at a baccalaureate-granting institution, student satisfaction with the community college experience, and student satisfaction with five

general education goals. In addition, this study described selected demographic and educational characteristics of North Iowa Area Community College transfer students.

The study answered the following research questions:

1. Did differences exist in length of exposure (attendance) and the ACT composite score, high school grade point average, gender, and education level of parents at the time of the transfer student's enrollment at the community college?
2. Did differences exist in transfer student satisfaction in four general education goals and length of exposure (attendance) at the community college?
3. Did differences exist in transfer student satisfaction with the community college experience and student satisfaction in four general education goals?
4. Did differences exist in transfer student academic performance at a baccalaureate-granting institution and length of exposure (attendance) at the community college?
5. Did differences exist in transfer student incoming characteristics and student satisfaction in four general education goals?

RESEARCH DESIGN

General Design

This was a theoretical research study. This study used the conceptual model developed by Astin (1965a, 1966, 1970a, 1970) as the basis for investigation. This student development model (see Figure 1) was comprised of three components: Student Incoming Characteristics, the College Environment, and Student Outcomes. Each are presented more fully below.

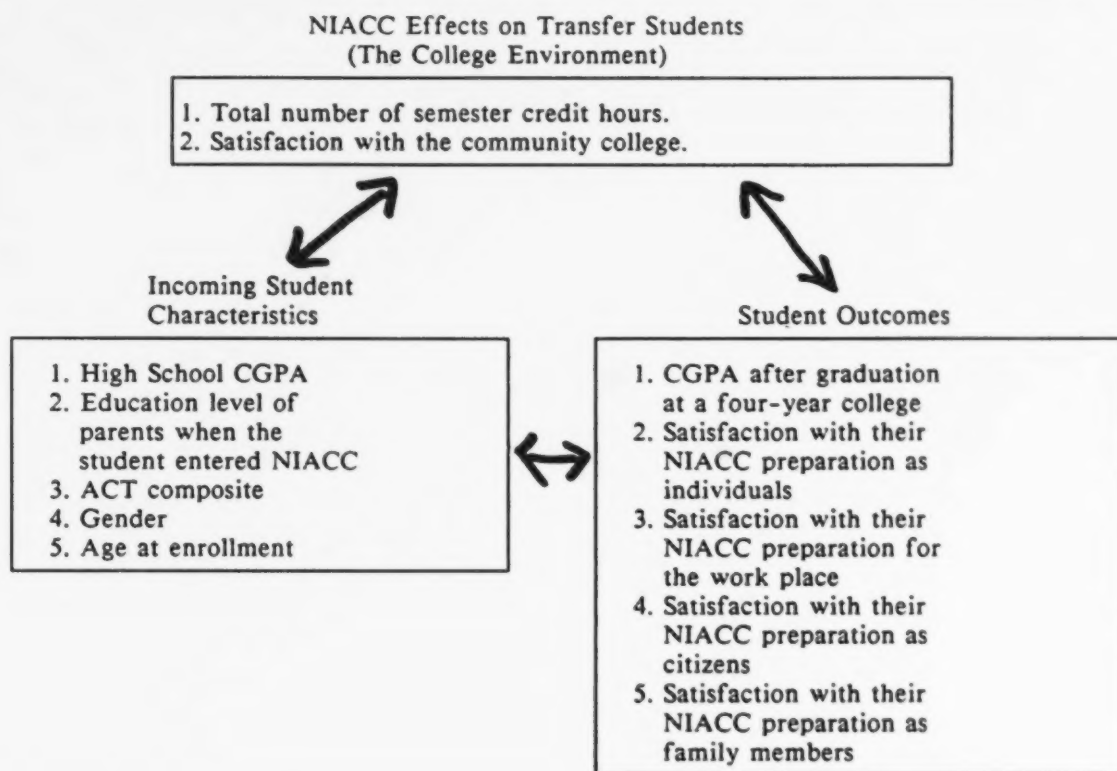


Figure 1. Model for inquiry of the effects of the community college on transfer students (Adapted from Astin [1970a] *Sociology of Education*)

The relationship between the three components of Astin's model is indicated by arrows (see Figure 1). For example, student outcomes may be impacted by either the college environment, student incoming characteristics, or both. In addition, interaction effects may occur with student incoming characteristics and the college

environment. Consequently, the present investigation has approached the issue of college attendance impacts transfer student outcomes by the experience of attending college. Therefore, the likelihood of these outcomes should be the greatest for the transfer student with the longest attendance at the community college.

SCOPE, POPULATION, AND SAMPLE

Scope

This study consisted of a cohort of transfer students at North Iowa Area Community College of Mason City, Iowa, who entered the College between the fall of 1981 and the summer of 1983.

It was not the intent to the study to examine all possible effects on all college students. Instead, this study examined the length of exposure to college effects, as measured by total semester credit hours achieved at North Iowa Area Community College and student satisfaction with their NIACC experience as reported on a mail survey. Student satisfaction was determined to be a subjective, individual, self-assessment with regard to his/her general education outcomes and college experience.

This study did not seek to understand the nature or type of college impact. Rather, this dissertation determined the extent to which length of community college exposure (attendance) and student satisfaction effected cumulative grade point average at the transfer institution.

Population

The population studies consisted of all first-time Arts and Science and Career Option students enrolled at North Iowa Area Community College of Mason City, Iowa, from fall, 1981 to summer, 1983.

Sample

The sample was comprised of transfer students who had enrolled between the fall semester of 1981 and the spring semester of 1983 inclusive. The study sample was self-selected insofar as only those transfer students with both an ACT composite score and a high school cumulative grade point average listed on their permanent student record at NIACC were included.

Briefly, the sampling procedure consisted of obtaining data from sampled students from four sources: 1) NIACC student enrollment cards; 2) NIACC permanent student records; 3) Mail surveys; and 4) Transfer institution permanent student records. All data sources in this study were provided to the researcher while maintaining the confidentiality of each student.

Delimitations

This examination of community college effects on transfer students was delimited to the extent that is included only those first time students who indicated, upon entry to the college, an Arts and Science or Career Option classification. The study was further delimited in that it included only from North Iowa Area Community College in Mason City, Iowa, and considered only those students who entered the college between the fall semester of 1981 and the summer semester of 1983. Finally, the lack of commonly accepted definitions for measuring the concepts of job satisfaction and program satisfaction was also deemed to be a delimitation.

Data Gathering Procedures

This study examined the NIACC enrollment cards and permanent student transcript of each sampled student. In addition, a mail-out survey, distributed to the sample, obtained the following data:

- Transfer institution
- Community college satisfaction
- Father's educational level at the time of student enrollment
- College activity involvement
- Current college status
- Mother's educational level at the time of student enrollment

The study's data analyses involved both descriptive, non-parametric, and parametric statistics. Descriptive statistics were used with all sample variables. Specifically, the descriptives included count, percentage, mean, and standard deviation. Analysis of Variance (ANOVA), constituted the parametric statistical analysis. Finally, Chi-Square was used as the non-parametric test of the study variables. A Pearson Correlation was performed on all interval and ratio scale data to further examine variable relationships.

SURVEY RESULTS/SUMMARY

On June 12, 1989, 566 mailing list update letters with return post cards were mailed to the selected sample of transfer students whose NIACC permanent student records contained both ACT composite scores and high school cumulative grade point averages. Of the total mailed, 32 or 5.65 percent were returned as undeliverable, and 180 or 31.8 percent returned the mailing list update post cards. The mailing list update letter instructed the recipient to do nothing if the address on the letter was correct. It was assumed by this investigator that the remaining letters, not returned, contained correct addresses. July 6, 1989, initial survey packets were mailed to 534 (566 sampled students less 32 undeliverable) students. By July 14, 1989, 112 or 20.97 percent of the distributed surveys were returned. On the same date, a reminder post card was mailed to all surveyed students. The post card encouraged students who had not returned their surveys to do so as soon as possible. In addition, the post card served as a "thank you" to those students who had returned their surveys.

By July 24, 1989, an additional 82 or 15.36 percent of the surveys were received, bringing the total of returned surveys to 194 or 36.33 percent. On July 24, 1989, a second survey packet with modified cover letter was mailed to the 340 non-respondents. By August 4, 1989, an additional 64 surveys were received which constituted an additional 11.99 percent. The total number of surveys received by that date was 258 or 48.31 percent of the total mailed. The final distribution was sent by certified mail to the remaining 276 non-respondents. This mailing netted 69 or 12.92 percent of additional surveys. The survey process was concluded on August 14, 1989, with a total of 327 or 61.24 percent of the sampled students responding to the survey.

Definition of Terms

For the purpose of this study, the terms presented below were operationally defined (unless otherwise noted) as follows:

1. **Arts and Science Student:** A student enrolled in a community college in Iowa in a program that is composed of courses that would normally be used in a program leading to a baccalaureate degree (Fleming, 1972, p. 7)
2. **Attrition:** Failure to achieve some educational goal or objective (State University of New York, 1980).
3. **Baccalaureate-Granting Institution:** An accredited higher education institution that offers a Bachelor's Degree.
4. **College Effects:** Factors which influence student behavior, performance, or achievement.
5. **Cohort:** A defined grouping of individuals/students based on some characteristic or common denominator.
6. **Community College:** Two-year institution accredited to the awarding of the Associate in Arts Degree or the Associate in Science Degree as its highest offering (Cohen and Brawer, 1982). This definition does not include technical institutes or junior colleges.

7. Cumulative Grade Point Average: A mathematical calculation determined by totaling earned grade points and dividing them by the total of accumulated semester hours.
8. Degree Completion: The completion of the required total semester hours for a particular program of study. For both the Associate of Arts Degree and the Associate of Science Degree, 60 total semester credit hours are required.
9. Full Time Student: A student who carries a minimum of 12 hours each semester, with the exception of the summer semester, until graduation.
10. Persistence: The percentage of the original population still enrolled or having graduated during specified semesters (Richardson & Doucette, 1980).
11. Point of Entry: That point in time wherein a first-time student enrolls in the community college.
12. Semester Hours: A unit of measurement equaling 10-15 clock hours of class instruction or 20-25 laboratory class clock hours.
13. Student Satisfaction: An individual/personal perspective as to the degree to which the educational needs, desires, or requirements of a student have been fulfilled by an educational institution.
14. Student Outcomes: Halpern (1987) stated that the majority of available literature, at that time, had a wide variation in definitions of student outcomes, assessment, and other relevant terms. Lonning (et al, 1977) defined student outcomes as the results or consequences of an educational institution and its programs (p. 1). Given the lack of consensus in defining student outcomes, the following was adopted as an operation definition for the present investigation: any results or consequences of an educational institution or its programs, or their interaction with a student's incoming characteristics.

15. Transfer Shock: A cause and effect relationship between transfer and decline grade point average. (Nickens, 1972, p. 1).
16. Transfer Student: Synonymous with the Arts and Science and Career Option student.
17. Exposure: The number of semester credit hours achieved through enrollment at a college or university.

FINDINGS & RESULTS

This study was guided a general hypothesis. This section reconsiders these hypotheses and presents responses based on the findings of the preceding section. The general hypothesis stated earlier in this paper is presented below.

"This study tested the general hypothesis that the effect of the community college on the transfer student varies with the amount of exposure (attendance) to the college environment. The specific amount of college exposure may be measured by cumulative semester credit hours earned. Simply stated, the greater the cumulative number of semester credit hours earned, the greater the college effect in academic achievement at a baccalaureate-granting institution, and the greater the student satisfaction with the community college experience."

The general hypothesis was principally addressed by Hypotheses 3, 5, 7, 9, and 11 of the study (see attachments). Each of these hypotheses failed to be rejected with the notable exception of Hypothesis 7. With this hypothesis a significant relationship was observed between semester credit hours earned at NIACC and the level of transfer student satisfaction with their NIACC preparation for the work place. No significant difference or relationship was observed between semester credit hours earned at NIACC and GPA at graduation from a baccalaureate-granting institution, student satisfaction with their NIACC preparation as individuals, as citizens, and as family members for Hypotheses 3, 5, 9, and 11 respectively.

These findings did not fully support the general hypothesis that the effect of the community college on the transfer student varies with amount of exposure to the community college environment since the general hypothesis failed to be rejected in four out of five cases. These resultant findings suggested that the quantity of semester credit hours earned at the community college had little or no relation to student outcomes. However, the data did prove that the length of community college attendance was not negatively related to selected student outcomes.

TRANSPARENCIES

A
Study of the Relative Effect
of the
Community College on Transfer Students:
Achievement and Satisfaction

Iowa State University
Ames, Iowa
1990

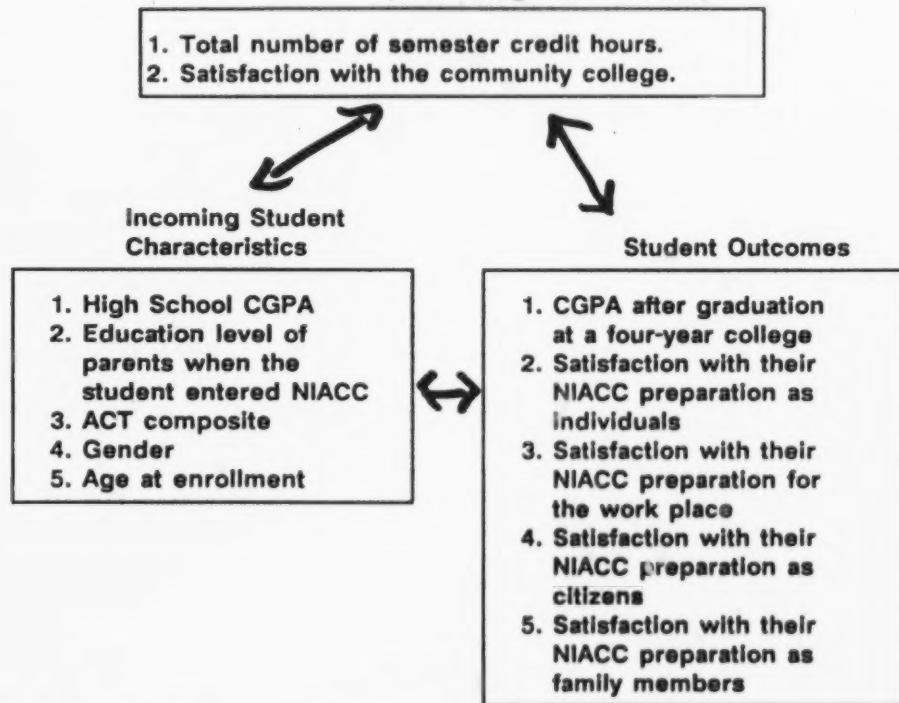
Purposes of the Study

- (1) To describe selected demographic and educational characteristics of transfer students;**
- (2) To determine the relative effect of community college attendance on student academic achievement;**
- (3) To determine the relative effect of community college attendance on student satisfaction with the community college experience; and**
- (4) To determine the relative effect of community college attendance on the community college fulfillment of selected general education goals.**

INVESTIGATION HYPOTHESIS

The effect of the community college on a transfer student varies with the amount of exposure (attendance) to the community college environment. Further, the specific amount of college exposure may be measured by cumulative semester credit hours earned by the student.

**NIACC Effects on Transfer Students
(The College Environment)**



Model for inquiry of the effects of the community college on transfer students (Adapted from Astin [1970a] Sociology of Education)

**General Education Goals
Johnson (1952)**

- (1) Exercise rights and responsibilities of a Democratic citizenship;**
- (2) Develop life guiding moral and spiritual values;**
- (3) Communicate through speaking and writing; develop understanding through reading and listening;**
- (4) Use mathematical and mechanical skills for daily living;**
- (5) Develop critical thinking skills;**
- (6) Develop an understanding of cultural heritage;**
- (7) Understand relationship of man and the environment;**
- (8) Maintain good mental and physical health;**
- (9) Develop a balanced personal and social adjustment;**
- (10) Share in the development of a satisfactory home and family life;**
- (11) Achieve a satisfactory vocational adjustment; and**
- (12) Participate in and appreciate some form of satisfying creative activity.**

Community College Effects

**Post-Secondary Education Transcript Study/National Longitudinal Study
Clifford Adelman (1988, 1989)**

Key Findings (1988) (N=22,000)

- (1) 20% of the two-year college attendees receive an A.A. Degree;**
- (2) 20% of the two-year college attendees transfer to a four-year college;**
- (3) 11% of the two-year college attendees, who transferred to a four-year college receive a Bachelor's Degree;**
- (4) 6% of the two-year college attendees earned both an Associate of Arts and Bachelor's Degrees;**
- (5) The majority of two-year college attendees did so within one year of high school graduation;**
- (6) 25% of two-year college attendees earned less than one semester's worth of credits.**

Key Findings (1989) (N=13,828)

- (1) Near equal distribution of community college enrollees by gender**
- (2) 8.9% attended both a community college and four-year institution**
- (3) 6% attended both a C-C and four year without earning a B.A. Degree**

**NIACC first-time transfer student enrollment report by
semester entered (1981-1983)**

Semester Entered NIACC	Male	Female	Total
Fall 1981	161	171	332
Spring 1982	6	27	33
Summer 1982	0	0	0
Fall 1982	74	90	164
Spring 1983	17	20	37
Summer 1983	<u>0</u>	<u>0</u>	<u>0</u>
Totals	258	308	566

Survey Development Procedures

- Step I. Review of selected methodological literature**
- Step II. Evaluation of the ACT survey instrument**
- Step III. Development of supplemental questions**
- Step IV. Review of survey instruments and procedures by an advisory panel**
- Step V. Pilot testing of the survey**
- Step VI. Administration of the survey**

North Iowa Area Community College transfer student
characteristics from returned surveys (N=327).

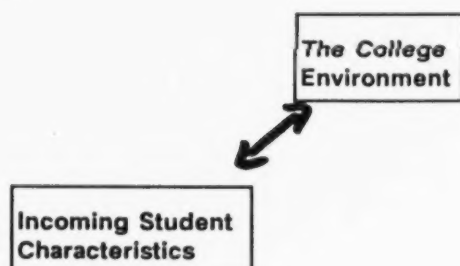
Characteristic	Median	Mean	Mode	Standard Deviation
Student Inputs:				
High School Cumulative Grade Point Average	3.070	2.993	2.830	0.578
ACT Composite Score	20.000	19.823	22.000	5.168
Student Gender (Percent)				
Male		42.8%		
Female			57.2%	
Student Age at Enrollment	18.000	18.382	18.000	2.412
College Environment:				
NIACC Cumulative Semester Credit Hours Earned	60.500	55.691	60.000	23.843
Student Satisfaction with the College Experience ^a	2.000		2.000	
Student Outputs:				
Student GPA at Baccalaureate- Granting Institution at Graduation	2.910	2.925	2.830	0.450
Student Satisfaction as an Individual ^a	2.000		2.000	
Student Satisfaction in the Work Place ^a	2.000		2.000	
Student Satisfaction as a Citizen ^a	2.000		2.000	
Student Satisfaction as a Family Member ^a	2.000		2.000	
Other Characteristics:				
NIACC Cumulative Grade Point Average	2.765	2.765	2.620	0.666
Percent that received a Bachelor's Degree from a Baccalaureate-Granting Institution		30.89%		
		(101)		

(^a) Satisfaction variables used in this investigation were measured on a
five-point Likert Scale (Very Satisfied = 1 to Very Dissatisfied = 5).

Additional characteristics of North Iowa Area Community
College transfer student returns (N=327).

Characteristic	Percent
Father's education level at student enrollment	
Eighth grade or less	8.9%
Some high school	7.0
High school graduate	41.0
Technical or Business	8.6
Some college	10.1
Two-year college Graduate	5.2
Four-year college Graduate	9.5
Some post-graduate studies	1.8
Received an advanced degree	5.5
Unknown	1.8
Missing variables	.6
Mother's education level at student enrollment	
Eighth grade or less	2.4%
Some high school	2.1
High school graduate	51.4
Technical or Business	11.3
Some college	12.5
Two-year college Graduate	7.3
Four-year college Graduate	6.7
Some post-graduate studies	1.5
Received an advanced degree	.9
Unknown	3.1
Missing variables	.6
Transfer Institution (N=101)	
Iowa State University	32.7
University of Iowa	1.0
University of Northern Iowa	47.5
Mankato State University	5.9
Drake University	1.0
Buena Vista College	4.0
Other	7.9

Summary and Conclusions



● Hypothesis 1.

There is no significant difference in cumulative semester credit hours earned by the NIACC transfer student according to the following transfer student characteristics:

- a. Cumulative high school GPA
- b. Education level of parents at student enrollment
- c. ACT Composite Score
- d. Gender
- e. Age at enrollment

● Hypothesis 2.

There is no significant difference in transfer student satisfaction with the NIACC experience according to the following transfer student characteristics:

- a. Cumulative high school GPA
- b. Education level of parents at student enrollment
- c. ACT composite score
- d. Gender
- e. Age at enrollment

Summary and Conclusions



Hypothesis 3.

There is no significant difference in NIACC transfer student cumulative grade point average upon graduating from a baccalaureate-granting institution and the cumulative semester credit hours earned at NIACC.

Hypothesis 4.

There is no significant difference in NIACC transfer student cumulative grade point average upon graduating from a baccalaureate-granting institution according to transfer student satisfaction with the NIACC experience.

Hypothesis 5.

There is no significant difference in NIACC transfer student satisfaction with their preparation as individuals according to the cumulative semester credit hours earned at NIACC.

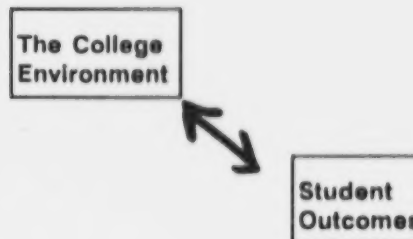
● Hypothesis 6.

There is no significant difference in NIACC transfer student satisfaction with their preparation as individuals according to transfer student satisfaction with the NIACC experience.

● Hypothesis 7.

There is no significant difference in NIACC transfer student satisfaction with their preparation for the work place according to the cumulative semester credit hours earned at NIACC.

Summary and Conclusions



● Hypothesis 8.

There is no significant difference in transfer student satisfaction with their NIACC preparation for the work place according to transfer student satisfaction with the NIACC experience.

Hypothesis 9.

There is no significant difference in transfer student satisfaction with their NIACC preparation as citizens according to cumulative semester credit hours earned at NIACC.

● Hypothesis 10.

There is no significant difference in transfer student satisfaction with their NIACC preparation as citizens according to transfer student satisfaction with the NIACC experience.

Hypothesis 11.

There is no significant difference in NIACC transfer student satisfaction with their preparation as family members according to cumulative semester credit hours earned at NIACC.

● Hypothesis 12.

This hypothesis tested whether transfer student satisfaction with their NIACC preparation as family members differed significantly according to their satisfaction with their experience at NIACC.

Summary and Conclusions



● Hypothesis 13.

There is no significant difference in NIACC transfer student cumulative grade point average at graduation from a baccalaureate-granting institution according to the following transfer student characteristics:

- a. Cumulative high school GPA
- b. Education level of parents at student enrollment
- c. ACT composite score
- d. Gender
- e. Age at enrollment

Hypothesis 14.

There is no significant difference in NIACC transfer student satisfaction with their preparation as individuals according to the following transfer student characteristics:

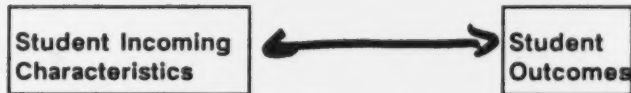
- a. Cumulative high school GPA
- b. Education level of parents at student enrollment
- c. ACT composite score
- d. Gender
- e. Age at enrollment

Hypothesis 15.

There is no significant difference in transfer student satisfaction with their NIACC preparation for the work place according to the following transfer student characteristics:

- 1. Cumulative high school GPA
- 2. Education level of parents at student enrollment
- 3. ACT composite score
- 4. Gender
- 5. Age at enrollment

Summary and Conclusions



Hypothesis 16.

There is no significant difference in NIACC transfer student satisfaction with their preparation as citizens according to the following transfer student characteristics:

- a. Cumulative high school GPA
- b. Education level of parents at student enrollment
- c. ACT composite score
- d. Gender
- e. Age

Hypothesis 17.

There is no significant difference in transfer student satisfaction with their NIACC preparation as family members according to the following transfer student characteristics:

- a. Cumulative high school GPA
- b. Education level of parents at student enrollment
- c. ACT composite score
- d. Gender
- e. Age at enrollment

Statistically significant variables used in the study

Study Variables	Statistical test(s)	Level of Significance
Semester credit hours earned by high school GPA	Pearson ANOVA	.01 .01
Semester credit hours earned by age at enrollment	Pearson ANOVA	.05 .01
Student satisfaction with the college experience by father's education	Pearson Chi-Square	N/A .05
Student satisfaction with their preparation as individuals by student satisfaction with the college experience	Pearson Chi-Square	.001 .001
Student satisfaction with their preparation for the work place by semester credit hours earned	Pearson Chi-Square	.001 .05
Student satisfaction with their preparation for the work place by student satisfaction with the college experience	Pearson Chi-Square	.001 .05
Student satisfaction with their preparation as citizens by student satisfaction with the college experience	Pearson Chi-Square	.001 .001
Student satisfaction with their preparation as family members by student satisfaction with the college experience	Pearson Chi-Square	.001 .001
GPA at BA graduation by high school GPA	Pearson ANOVA	.001 .001
GPA at BA graduation by ACT composite score	Pearson ANOVA	.01 .05
GPA at BA graduation by student age at enrollment	Pearson ANOVA	.05 N/A

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